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PATENT

Docket No.: 176/60792 (6-11415-868) 01-31-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Mahin D. Maines

Serial No. : 09/606,129

Filed : June 28, 2000

For : BILIVERDIN REDUCTASE FRAGMENTS
AND VARIANTS, AND METHODS OF
USING BILIVERDIN REDUCTASE AND
SUCH FRAGMENTS AND VARIANTS



Examiner:
Unknown

Art Unit:
Unknown

SUBMISSION OF REVISED SEQUENCE LISTING AND
STATEMENT IN ACCORDANCE WITH 37 C.F.R. § 1.821(g)

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Notice to File Missing Parts, applicant hereby submits a revised Sequence Listing (21 pages) on paper and on a computer readable 3.5" diskette. The revised sequence listing differs from the originally filed sequence listing by including data for the present application and revising the description of SEQ. ID. Nos. 7 and 8 to indicate that X at each position can be any amino acid. For each of SEQ. ID. Nos. 6-17, the listed sequences are motifs which generally define the sequences of various hGVR domains; hence, an X at each position can be any amino acid. In the originally filed sequence listing, typographical errors resulted in the incomplete description of SEQ. ID. Nos. 7 and 8. The revised Sequence Listing corrects these errors.

Pursuant to 37 CFR § 1.821(g), applicant submits that the information on the paper copy and the computer readable diskette are the same. This submission contains no new matter.

Respectfully submitted,

Edwin V. Merkel
Registration No. 40,087

Dated: December 18, 2000

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R431370.1

Certificate of Mailing - 37 CFR 1.8 (a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on the date below.

12/18/00
Date

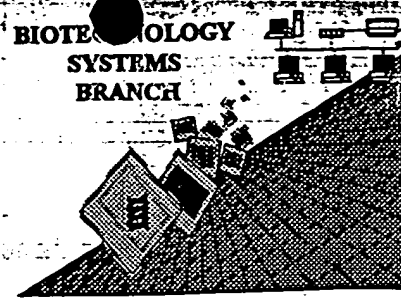
Wendy L. Harrold
Wendy L. Harrold

02 D 0

**RAW SEQUENCE LISTING
ERROR REPORT**



BIOTECHNOLOGY
SYSTEMS
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/606,129

Source: O/PK

Date Processed by STIC: 7/12/2000

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR FURTHER INFORMATION, PLEASE TELEPHONE MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:
<http://www.uspto.gov/web/offices/pac/checker>

OIIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/606,129

DATE: 07/12/2000

TIME: 10:58:14

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 5 <120> TITLE OF INVENTION: BILIVERDIN REDUCTASE FRAGMENTS AND VARIANTS, AND
 6 METHODS OF USING BILIVERDIN REDUCTASE AND SUCH
 7 FRAGMENTS AND VARIANTS
 9 <130> FILE REFERENCE: 176/60792
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/606,129
 C--> 12 <141> CURRENT FILING DATE: 2000-06-28
 14 <150> PRIOR APPLICATION NUMBER: 60/141,309
 15 <151> PRIOR FILING DATE: 1999-06-28
 17 <150> PRIOR APPLICATION NUMBER: 60/163,223
 18 <151> PRIOR FILING DATE: 1999-11-03
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 37 35 40 45
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 40 50 55 60
 42 Ser Gln Glu Val Glu Val Ala Tyr Ile Cys Ser Glu Ser Ser Ser His
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 45 Glu Asp Tyr Ile Arg Gln Phe Leu Asn Ala Gly Lys His Val Leu Val
 46 85 90 95
 48 Glu Tyr Pro Met Thr Leu Ser Leu Ala Ala Ala Gln Glu Leu Trp Glu
 49 100 105 110
 51 Leu Ala Glu Gln Lys Gly Lys Val Leu His Glu Glu His Val Glu Leu
 52 115 120 125
 54 Leu Met Glu Glu Phe Ala Phe Leu Lys Lys Glu Val Val Gly Lys Asp
 55 130 135 140
 57 Leu Leu Lys Gly Ser Leu Leu Phe Thr Ser Asp Pro Leu Glu Glu Asp
 58 145 150 155 160
 60 Arg Phe Gly Phe Pro Ala Phe Ser Gly Ile Ser Arg Leu Thr Trp Leu
 61 165 170 175
 63 Val Ser Leu Phe Gly Glu Leu Ser Leu Val Ser Ala Thr Leu Glu Glu
 64 180 185 190
 66 Arg Lys Glu Asp Gln Tyr Met Lys Met Thr Val Cys Leu Glu Thr Glu
 67 195 200 205
 69 Lys Lys Ser Pro Leu Ser Trp Ile Glu Glu Lys Gly Pro Gly Leu Lys
 70 210 215 220
 72 Arg Asn Arg Tyr Leu Ser Phe His Phe Lys Ser Gly Ser Leu Glu Asn

see
P.S.
 Does Not Comply
 Corrected Diskette Needed

RAW SEQUENCE LISTING

DATE: 07/12/2000

PATENT APPLICATION: US/09/606,129

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96 tccgtgcgga tgagggactt gcggaatcca cacccttctt cagcgttctt gaacctgatt 180
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102 gtggggaaaag acctgctgaa agggtcgctc ctcttcacat ctgaccggtt ggaagaagac 540
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105 atgacagtgt gtctggagac agagaagaaa agtcactgt catggattga agaaaaagga 720
106 cctggtctaa aacgaaacag atatttaagc ttccatttca agtctgggtc cttggagaat 780
107 gtgccaaatg taggagttaa taagaacata tttctgaaag atcaaaatat atttgtccag 840
108 aaactcttgg gccagttctc tgagaaggaa ctggctgctg aaaagaaacg catcctgcac 900
109 tgcttggggc ttgcagaaga aatccagaaa tattgtgtt caaggaaata agaggaggag 960
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130 50 55 60
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133 65 70 75 80
135 Glu Asp Tyr Ile Arg Gln Phe Leu Asn Ala Gly Lys His Val Leu Val
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DATE: 07/12/2000

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TIME: 10:58:14

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144 Leu Met Glu Glu Phe Ala Phe Leu Lys Lys Glu Val Val Gly Lys Asp
145                      130                      135                      140
147 Leu Leu Lys Gly Ser Leu Leu Phe Thr Ala Gly Pro Leu Glu Glu Glu
148 145                      150                      155                      160
150 Arg Phe Gly Phe Pro Ala Phe Ser Gly Ile Ser Arg Leu Thr Trp Leu
151                      165                      170                      175
153 Val Ser Leu Phe Gly Glu Leu Ser Leu Val Ser Ala Thr Leu Glu Glu
154                      180                      185                      190
156 Arg Lys Glu Asp Gln Tyr Met Lys Met Thr Val Cys Leu Glu Thr Glu
157                      195                      200                      205
159 Lys Lys Ser Pro Leu Ser Trp Ile Glu Glu Lys Gly Pro Gly Leu Lys
160 210                      215                      220
162 Arg Asn Arg Tyr Leu Ser Phe His Phe Lys Ser Gly Ser Leu Glu Asn
163 225                      230                      235                      240
165 Val Pro Asn Val Gly Val Asn Lys Asn Ile Phe Leu Lys Asp Gln Asn
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168 Ile Phe Val Gln Lys Leu Leu Gly Gln Phe Ser Glu Lys Glu Leu Ala
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191 35 40 45
193 Ser Leu Asp Glu Val Arg Gln Ile Ser Leu Glu Asp Ala Leu Arg Ser
194 50 55 60
196 Gln Glu Ile Asp Val Ala Tyr Ile Cys Ser Glu Ser Ser Ser His Glu
197 65 70 75 80
199 Asp Tyr Ile Arg Gln Phe Leu Gln Ala Gly Lys His Val Leu Val Glu
200 85 90 95
202 Tyr Pro Met Thr Leu Ser Phe Ala Ala Ala Gln Glu Leu Trp Glu Leu
203 100 105 110
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206 115 120 125
208 Met Glu Glu Phe Glu Phe Leu Arg Arg Glu Val Leu Gly Lys Glu Leu
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 PATENT APPLICATION: US/09/606,129

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217 Ser Leu Phe Gly Glu Leu Ser Leu Ile Ser Ala Thr Leu Glu Glu Arg
218                      180                      185                      190
220 Lys Glu Asp Gln Tyr Met Lys Met Thr Val Gln Leu Glu Thr Gln Asn
221                      195                      200                      205
223 Lys Gly Leu Leu Ser Trp Ile Glu Glu Lys Gly Pro Gly Leu Lys Arg
224                      210                      215                      220
226 Asn Arg Tyr Val Asn Phe Gln Phe Thr Ser Gly Ser Leu Glu Glu Val
227 225                      230                      235                      240
229 Pro Ser Val Gly Val Asn Lys Asn Ile Phe Leu Lys Asp Gln Asp Ile
230                      245                      250                      255
232 Phe Val Gln Lys Leu Leu Asp Gln Val Ser Ala Glu Asp Leu Ala Ala
233                      260                      265                      270
235 Glu Lys Lys Arg Ile Met His Cys Leu Gly Leu Ala Ser Asp Ile Gln
236                      275                      280                      285
238 Lys Leu Cys His Gln Lys Lys
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255 ggagctgtgg gagctggccg cacagaaagg gagagtcctg catgaggagc acgtggaact 480
256 ctgtatggag gaattcgaat tcctgagaag agaagtgttg gggaaagagc tactgaaagg 540
257 gtctcttcgc ttcacagcta gccactgga agaagagaga ttggcttcc ctgcgttcag 600
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262 gaacattttc ctgaaagatc agaatatatt tgttcagaag ctcttagacc aggtctctgc 900
263 agaggacctg gctgctgaga aqaagcgcac catgcattgc ctggggcttg ccagcgacat 960
264 ccagaagcct tgcaccaga agaagtgaag aggaagcttc agagacttct gaagggggcc 1020
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271 <212> TYPE: PRT
272 <213> ORGANISM: Artificial Sequence
274 <220> FEATURE:

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VERIFICATION SUMMARY

DATE: 07/12/2000

PATENT APPLICATION: US/09/606,129

TIME: 10:58:15

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L:11 M:270 C: Current Application Number differs, Replaced Application Number
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:284 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:303 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:336 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:339 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
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L:452 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:471 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17